

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments, see p. 13-14, filed 11-30-07, with respect to the rejection(s) of claim(s) 26-39 under 35 U.S.C. 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Nishi (20010010579).

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 26-37 and 39-47 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Nishi (20010010579).

Re claim 26, Nishi teaches for example in fig. 2 and 4, a projection objective in microlithography for producing semiconductor components, the projection objective comprising: a first housing comprising (47) at least one first optical element (L31) having a first optical axis (AX2); and a second housing (44, 53) comprising a structural configuration that is different from a structural configuration of the first housing (fig. 2), the second housing comprising at least one second optical element (L14, L41) having a

second optical axis (AX1, AX3), and the second housing comprising a seat (53a, 53b, point where 47 contacts the side of 44, point where 47 contacts top of 44) configured for removably mounting the first housing in an adjustment relationship (para. 0066).

Re claim 27, Nishi further teaches for example in fig. 2 and 4, the first optical axis (optical axis of 50 which is collinear with AX3) is collinear (fig. 2) with the second optical axis (AX1, AX3).

Re claim 28, Nishi further teaches for example in fig. 2 and 4, the first optical axis (AX2) extends perpendicularly to the second optical axis (AX1, AX3).

Re claim 29, Nishi further teaches for example in fig. 2 and 4, the first optical axis (optical axis of 50 which is collinear with AX3) extends parallel with the second optical axis (AX1, AX3).

Re claim 30, Nishi further teaches for example in fig. 2 and 4, at least one of the first (47) and the second housings (44, 53) comprises another seat (53a) configured for removably mounting of at least one of an optical element and an optical subassembly in an adjustment relationship (para. 0066).

Re claim 31, Nishi further teaches for example in fig. 2 and 4, at least one of the first (47) and the second housings (44, 53) comprises a plurality of seats (53a, 53b,

point where 47 contacts the side of 44, point where 47 contacts top of 44) configured for removably mounting of at least one of an optical element and an optical subassembly and another housing in an adjustment relationship (para. 0066).

Re claim 32, Nishi further teaches for example in fig. 2 and 4, the plurality of the seats comprises at least two seats (47a, 53b) being substantially planar (fig. 2) and in parallel relation to one another (fig. 2).

Re claim 33, Nishi further teaches for example in fig. 2 and 4, the plurality of the seats comprises at least two seats (point where 47 contacts the side of 44, 53b) being substantially planar (fig. 2) and in perpendicular relation to one another (fig. 2).

Re claim 34, Nishi further teaches for example in fig. 2 and 4, the first housing (47) comprises a seat (47a) configured for removably mounting at least one of an optical element and an optical subassembly in an adjustment relationship (para. 0066), the seat (47a) of the first housing in parallel relation (fig. 2) to the seat (53b) of the second housing.

Re claim 35, Nishi further teaches for example in fig. 2 and 4, the first housing (47) comprises a seat (47a) configured for removably mounting at least one of an optical element and an optical subassembly in an adjustment relationship (para. 0066),

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the seat (47a) of the first housing in perpendicular relation (fig. 2) to the seat (point where 47 contacts the side of 44) of the second housing (44).

Re claim 36, Nishi further teaches for example in fig. 2 and 4, the first (47) and the second housing (44, 53) comprise a first and a second barrel structure (fig. 2), respectively, and wherein the first and the second optical elements are arranged to perform at deflection (via 50).

Re claim 37, Nishi further teaches for example in fig. 2 and 4, comprising a light source, the light source comprising a laser (para. 0058).

Re claim 39, Nishi further teaches for example in fig. 2 and 4, a reticle masking system comprising the projection objective (para. 0026).

Re claim 40, Nishi further teaches for example in fig. 2 and 4, the first housing (47) contacts the second housing (44, 53; fig. 2).

Re claim 41, Nishi further teaches for example in fig. 2 and 4, the first housing (47) is physically against the second housing (44, 53; fig. 2).

Re claim 42, Nishi further teaches for example in fig. 2 and 4, the seat (53b) comprises a portion of an exterior surface of the second housing (53), and wherein the first housing (47) is joined to the seat of the second housing (fig. 2).

Re claim 43, Nishi further teaches for example in fig. 2 and 4, the seat (53b) comprises a portion of an exterior surface of the second housing (53), and wherein the first housing (47) comprises an exterior surface, and wherein a portion of the exterior surface (47a) of the first housing is mated with the seat of the second housing (fig. 2).

Re claim 44, Nishi further teaches for example in fig. 2 and 4, the second housing (44, 53) comprises a length dimension (parallel to AX1 or AX3) greater than a height dimension (perpendicular to AX1 or AX3), and wherein the seat (point where 47 contacts the side of 44) is oriented to extend along the length dimension (fig. 2).

Re claim 45, Nishi further teaches for example in fig. 2 and 4, the second housing (44, 53) comprises a length dimension (parallel to AX1 or AX3) greater than a height dimension (perpendicular to AX1 or AX3), and wherein the seat (53b) is oriented to extend perpendicular (fig. 2) to the second optical axis (AX3).

Re claim 46, Nishi further teaches for example in fig. 2 and 4, the seat (53b) comprises a first planar surface (surface of 53b perpendicular to AX3), wherein the second housing (53) comprises another seat (53a), the another seat comprising a

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second planar surface (surface of 53a parallel to AX3) perpendicular to the first planar surface (fig. 2).

Re claim 47, Nishi further teaches for example in fig. 2 and 4, the seat comprises a first seat (point where 47 contacts top of 44), the first seat comprising a planar surface (surface of 44 parallel with AX1), and wherein the second housing (44) comprises a second seat (44a) and a third seat (point where 47 contacts the side of 44), the second and third seats comprising respective different planar surfaces (fig. 2), and wherein the third seat is perpendicular to the first and second seats (fig. 2).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nishi (20010010579).

Re claim 38, supra claim 26. Furthermore, Nishi further teaches for example in fig. 2 and 4, an ultraviolet system comprising the projection objective (fig. 2).

But, Nishi fails to explicitly teach extreme ultraviolet.

However, Nishi teaches for example in fig. 2 and 4, varying the light source (para. 0040) and providing illumination with less than 200nm wavelength (para. 0026 and 0040).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Nishi with an extreme ultraviolet system in order to increase power output.

### ***Allowable Subject Matter***

Claims 1, 4 and 8-25 are allowed.

The following is an examiner's statement of reasons for allowance: the prior art taken alone or in combination fails to anticipate or fairly suggest the limitations of the claims, in such a manner that a rejection under 35 USC 102 or 103 would be proper. The prior art fails to teach a combination of all the claimed features as presented in independent claims 1, 20 and 25.

Specifically regarding claim 1, Ikeda (5638223) teaches the state of the art of a projection objective.

But, Ikeda fails to explicitly teach a combination of all the claimed features including provided as said further external surfaces are two mutually parallel seats which lie at an angle of less than 30 degrees to a further optical axis, as claimed.

Specifically regarding claim 20, Ikeda (5638223) teaches the state of the art of a projection objective.

But, Ikeda fails to explicitly teach a combination of all the claimed features including provided are two mutually parallel seats which lie at an angle of less than 30 degrees to a further optical axis; and further comprising a fourth seat arranged at an angle of 45 degrees +/- 15 degrees to the first seat and to said two mutually parallel seats, and wherein arranged on said fourth seat is a deflecting mirror for producing a third optical axis for a second housing structure, as claimed.

Specifically regarding claim 25, Ikeda (5638223) teaches the state of the art of a projection objective.

But, Ikeda fails to explicitly teach a combination of all the claimed features including provided as said further external surfaces are two mutually parallel seats which lie at an angle of less than 30 degrees to a further optical axis; and further comprising a fourth seat arranged at an angle of 45 degrees +/- 15 degrees to the first seat and to said two mutually parallel seats, and wherein arranged on said fourth seat is a deflecting mirror for producing a third optical axis for a second housing structure, as claimed.

As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).



Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph P. Martinez whose telephone number is 571-272-2335. The examiner can normally be reached on M-F 7:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on 571-272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Joseph Martinez/  
Patent Examiner, AU 2873  
4-14-08